# IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF OKLAHOMA

H. LESTER WALD, et al.,	)
Plaintiffs,	)
v.	) No. CIV-04-1693-C
MUDHOPPER OILFIELD SERVICES, INC., et al.,	) ) )
Defendants.	)

## **MEMORANDUM OPINION & ORDER**

On April 12, 2006, the jury in this case returned a verdict that Defendants infringed Plaintiffs' patent (the Wald patent) based on Defendants' sales of Poly Drill Sticks and awarded Plaintiffs damages based on those sales and Defendants' sales of another product, Hole Sweep Sticks, which the parties stipulated infringed the Wald patent. (Dkt. No. 70.) The jury also found, by special interrogatory, that there was clear and convincing evidence that Defendants' infringement was willful. (Dkt. No. 69.) At the close of evidence, Defendants' counsel moved for judgment as a matter of law (JMOL) on the issue of infringement under the doctrine of equivalents because "no reasonable jury would find that the equivalent container is present [in the Poly Drill Sticks]." (Tr. at 276.) After the verdict was announced, Defendants again moved for "judgment notwithstanding the verdict as being unsupported by the evidence." (Tr. at 304.) Defendants were instructed to file that motion in writing. (Id.)

Defendants have since filed their written post-verdict motion for JMOL, which is presently before the Court. Plaintiffs have responded, and Defendants have filed a reply. For the reasons explained below, Defendants' motion is denied.

## **STANDARD**

Federal Rule of Civil Procedure 50(a) allows motions for JMOL to be made "[I]f during a trial by jury a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue" and at any time before submission of the case to the jury. A Rule 50(a) motion must "specify the judgment sought and the law and the facts on which the moving party is entitled to the judgment." According to Rule 50(b), "[i]f, for any reason, the court does not grant a motion for [JMOL] made at the close of all the evidence, the court is considered to have submitted the action to the jury subject to the court's later deciding the legal questions raised by the motion." The movants may renew their pre-verdict motion no later than ten days after the entry of judgment. Id.

JMOL is appropriate "only 'if the jury's factual findings are not supported by substantial evidence or if the legal conclusions implied from the jury's verdict cannot in law be supported by those findings." <u>Junker v. Eddings</u>, 396 F.3d 1359, 1364 (Fed. Cir. 2005), <u>cert. denied</u>, \_\_\_\_ U.S. \_\_\_\_, 125 S. Ct. 2937 (2005) (<u>quoting Cybor Corp. v. FAS Techs., Inc.</u>, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc)). Thus, the Court must first "determine what facts are supported by substantial evidence" and second "determine whether those facts

support the legal conclusion necessarily drawn by the jury en route to its verdict." Railroad Dynamics, Inc. v. A. Stucki Co., 727 F.2d 1506, 1513 (Fed. Cir. 1984).

The Federal Circuit reviews the decision on a motion for JMOL de novo, applying the standard applicable in the regional circuit where the district court sits. Old Town Canoe Co. v. Confluence Holdings Corp., 448 F.3d 1309, 1314 (Fed. Cir. 2006); Markman v. Westview Instruments, Inc., 52 F.3d 967, 975 (Fed. Cir. 1995). Law in the Tenth Circuit requires this Court to make all reasonable inferences in favor of the non-moving party and to refrain from weighing the evidence or making credibility determinations. Loughridge v. Chiles Power Supply Co., Inc., 431 F.3d 1268, 1280 (10th Cir. 2005). The Court will grant such a motion for JMOL "only if the evidence points but one way and is susceptible to no reasonable inferences which may support the opposing party's position." Id. (quoting Finley v. United States, 82 F.3d 966, 968 (10th Cir. 1996)).

#### DISCUSSION

Defendants argue that the Court should enter JMOL in their favor because: (1) no reasonable jury could have found that the Poly Drill Stick satisfied the function/way/result test to infringe the Wald patent under the doctrine of equivalents; (2) the infringement verdict violates the "all limitations" rule; and (3) the infringement verdict impermissibly allowed Plaintiffs to exclude a product that was obvious, based on prior art, at the time the Wald patent issued. Alternatively, Defendants contend that they are entitled to JMOL with respect to the finding of willfulness, which they contend was against the substantial weight of evidence presented at trial. These arguments are addressed below.

## 1. Infringement Under the Doctrine of Equivalents

The jury was instructed that if they found that the Poly Drill Stick includes the equivalent of a "container" under the doctrine of equivalents, then Defendants would be liable for infringing the Wald patent based on their sales activities relating to the Poly Drill Sticks. (Dkt. No. 68, Jury Instruction No. 6.) The jury was further instructed:

The Court has construed the term "container" to mean any thing, somehow distinguishable from the well treatment composition it is intended to enclose, that is inert to the composition and of suitable size, shape, and substance to deliver the composition. Something is equivalent to a "container," as defined, if:

- 1. it performs substantially the same function,
- 2. in substantially the same way,
- 3. to produce the same result.

In deciding whether the Poly-Drill stick contains the equivalent of a "container," as defined, you should review the evidence from the perspective of a person of ordinary skill in the art. The test is objective, that is, whether at the time of the claimed infringement, a person of ordinary skill in the art would have considered the differences insubstantial. You should consider the context of the entire claim, including the Wald patent drawings, written descriptions, application and history as well as prior art and all of the circumstances of the case.

## (Id., Jury Instruction No. 7.)

Defendants contend that the Poly Drill Stick does not contain the equivalent of a container because it does not perform "the function of allowing the well treatment composition of polymer to dissolve below the surface" in substantially the same way as a "patented stick" or achieve the same result "in performing the function of allowing the well treatment composition to dissolve below the surface." (Defs.' Br. at 6-7.) In support of their

argument, Defendants identify testimony that the Poly Drill Stick dissolves at a different rate than a product sold by one of the Plaintiffs and covered by the Wald patent.

"The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes." Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 535 U.S. 722, 733 (2002). "An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused device 'performs substantially the same function in substantially the same way to obtain the same result' as the claim limitation." Aquatex Indus., Inc. v. Techniche Solutions, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608 (1950)).

Accepting that Defendants have articulated a proper function of the Wald patent's container (i.e., of allowing the well treatment composition of polymer to dissolve below the surface), the Court cannot find that there was insubstantial evidence to support the jury's infringement verdict. With respect to Defendants' "way" argument, Defendants have not identified evidence that a difference in the dissolution rates would, when viewed from the perspective of one of ordinary skill in the art, preclude the Poly Drill's container equivalent from performing the container function in substantially the same way. As an initial matter, the jury was not required to accept that there was a difference in dissolution rates. Specifically, the jury was entitled to credit Defendant Brook's deposition testimony that the Poly Drill Stick dissolves "pretty quickly" over his in-trial testimony and other evidence that

the Poly Drill Stick dissolved slowly or incompletely before "eventually" being dissolved at the drill bit. (Tr. at 156; 252-53; 266.) Further, even if the jury believed that there was a difference in rates, it need not have found that the difference would be considered a "substantial difference" to one of ordinary skill in the applicable art. There was evidence, unquestioned at trial or in the present motion, that the polymer contained in a Poly Drill Stick was released below surface. (Tr. at 93; 253-54.) There also was testimony offered regarding the value of polymer after the polymer/drilling fluid mix exits the drill bit. (Tr. at 59-67.) Therefore, the jury could have reasonably concluded that whatever difference there was between the dissolution rates of the Wald patent's partially soluble container and the Poly Drill Stick, both dissolved below surface and completely by the time the drill bit was reached.

Considering the "way" the polymer is released, as a bubble or gradually, as opposed to the rate of dissolution, does not change the analysis or ruling. (See Defs.' Reply at 2 (complaining that Plaintiffs' response misses the point).) First, the Wald patent discloses a partially soluble container that encloses a well treatment composition in either a powdered or liquid form. Defendants did not produce evidence of when the Wald container would be "compromised" (as it dissolves) or that the result necessarily would produce a true pocket or bubble of treatment composition in the drilling fluid. (See Defs.' Br. at 5 ("Logic dictates that in any . . . embodiment within the scope of the patented claim of a container . . . as soon as the integrity of the container is compromised by the solvent, its entire content of well treatment composition will rapidly be exposed to the drilling mud, thereby creating a

'bubble,' if you will, of polymer (or other concentrated treatment composition) in the drilling mud at whatever depth the integrity of the container is compromised by dissolution.")) The Court declines to draw inferences against the non-movant, especially when Defendants failed to present their "bubble" theory to the jury but would instead have the Court upset the verdict as illogical.

Second, there was simply no evidence that a person of ordinary skill in the applicable art would necessarily consider the difference in a bubble versus "slow" release substantial in how the Poly Drill Stick performs the function of introducing polymer below surface. The Court recognizes the need to not confuse the overall function of the Poly Drill Stick (accused device) with the function of a container equivalent. Still, given the purpose of the invention and evidence about the industry need for a method of introducing polymer below-surface, which is a container function, the jury could have found that whatever difference there may be in the manner in which polymer is introduced below surface is not a substantial difference. Accordingly, for the reasons set out above, the jury was entitled to find that elements of the Poly Drill Stick performed the dissolution-below-surface function of the Wald patent's container and in substantially the same way.

Defendants' "result" argument also fails. There was evidence at trial that the Poly Drill Stick delivered a well treatment composition of polymer below surface. Thus, the jury could have reasonably found that the Poly Drill Stick achieved substantially the same result as would have been achieved through the use of a literal container. Specifically, based on the evidence, it would have been reasonable to conclude that the solid-stick structure and

soap additives of the Poly Drill Stick allowed for a safer and more cost-effective means of introducing polymer than previously existed. (Tr. at 67-72.) Defendant Brooks testified that the Poly Drill Sticks are a *better* product than what is disclosed in the Wald patent in terms of accidental breakage (on the rig floor) and "blowback." (Tr. at 243-45.) However, the jury need not have considered those differences significant because Brooks did not quantify the advantage and the Poly Drill Stick did not eliminate problems associated with above-surface breakage and blowback. Moreover, the jury was entitled to credit other evidence that the Wald patent does show an improvement over prior methods of introducing polymer and that the Poly Drill Stick's solid structure and soap additives allow it to accomplish the same end, namely, through easy transport and below-surface dissolution. Because there was evidence that elements of the Poly Drill Stick performed the function of the Wald patent container in substantially the same way to achieve the same result, Defendants' motion for JMOL on the infringement verdict is denied.

## 2. "All Limitations" Rule

Defendants also argue that because the entire Poly Drill Stick is a treatment composition corresponding to the treatment composition element of the Wald patent, the infringement verdict vitiates the Wald patent requirement that the treatment composition be "in" or "enclosed in" a container. (Defs.' Br. at 10.) Thus, Defendants contend that the jury's verdict conflicts with the "all limitations" rule, which prohibits application of the doctrine of equivalents if the result would be to "effectively eliminate [an] element in its

entirety." (Defs.' Br. at 8 (quoting Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997) (emphasis omitted))).

As an initial matter, Plaintiffs complain that this argument was not raised earlier, including in Defendants' pre-verdict motion for JMOL, and was therefore waived. Rule 50 requires that the law and facts on which a movant relies be specified, at least with "sufficient certainty to apprise the court and opposing counsel of the movant's position." United Int'l Holdings, Inc. v. Wharf (Holdings) Ltd., 210 F.3d 1207, 1229 (10th Cir. 2000) (quoting 9A Charles Alan Wright & Arthur R. Miller, Federal Practice and Procedure § 2533 (1995), 310). "The requirement for specificity is not simply the rule-drafter's choice of phrasing. In view of a litigant's Seventh Amendment rights, it would be constitutionally impermissible for the district court to re-examine the jury's verdict and to enter JMOL on grounds not raised in the pre-verdict JMOL." Duro-Last, Inc. v. Custom Seal, Inc., 321 F.3d 1098, 1107 (Fed. Cir. 2003).

Here, counsel referred to the insufficiency of the evidence with respect to any potential container-equivalent, but in no way alluded to the legal contention described above. The Court had the authority to take the issue of infringement away from the jury based on this limitation, if warranted. Newell Cos., Inc. v. Kenney Mfg. Co., 864 F.2d 757, 763 (Fed. Cir. 1988) ("[T]here is no question that the court may take the issue from the jury on a directed verdict or JNOV motion at least in the same circumstances where it could have granted summary judgment."); Warner-Jenkinson Co., 520 U.S. at 39 n.8 ("[U]nder the particular facts of a case, . . . if a theory of equivalence would entirely vitiate a particular

claim element, partial or complete judgment should be rendered by the court, as there would be no further *material* issue for the jury to resolve."). However, Defendants failed to identify their argument in the pre-verdict motion for JMOL. See Newell, 862 F.2d at 764 n.6 (emphasizing that a litigant is responsible for seeking a ruling on a legal issue and the court is not obligated to act sua sponte).

Nor did Defendants raise this issue at summary judgment or in the pretrial report or assert it as a basis for an objection to the jury instructions or verdict form. Defendants did not simply omit this argument from their pre-verdict motion for JMOL; they failed to raise the issue *at all* before the case went to the jury. Although a question of law need not be raised in a pre-verdict motion for JMOL to be preserved, it does need to be identified at some point before the case goes to the jury. See Ruyle v. Cont'l Oil Co., 44 F.3d 837, 841 (10th Cir. 1994) (explaining that question of law raised before the case goes to the jury need not be included as an issue in a motion for a directed verdict); Morrison Knudsen Corp. v. Fireman's Fund Ins. Co., 175 F.3d 1221, 1249 n.37 (10th Cir. 1999) (objecting to verdict form preserved question of law omitted from pre-verdict JMOL for appeal). Thus, the Court agrees that Defendants failed to advance a legal argument that is not appropriately raised, for the first time, in a post-verdict motion for JMOL.

However, even if Defendants' argument were properly before the Court, it is flawed in two critical respects. First, there was sufficient evidence that the polymer was held together or bound by the soap/surfactant in the Poly Drill Stick. There was testimony that a Poly Drill Stick is formed by adding a fine-powdered polymer to melted surfactant, poured

into a stick form, and allowed to harden (Tr. at 224-25, 228, 232-234), and that a stick is comprised of 40 % polymer and 60% surfactant (Tr. at 232). Plaintiffs' expert testified that the polymer (PHPA) molecules are effectively "held in place by the soap, so the soap . . . [is] actually acting as a container for the PHPA. Otherwise, we would have powder [rather than a stick]." (Tr. at 155.) Based on this evidence, the jury could have reasonably found that the polymer was contained by the surfactant, even if it was not within the confines of a literal container.

Second, the surfactant could be part of the treatment composition and a binding agent without effectively eliminating any limitation of the Wald patent container. "Every limitation of the claim must have an equivalent within the accused device, although it need not necessarily have a corresponding component. A single structure in the accused device may perform the functions of two or more claim limitations. Thus, there need not be a one-to-one correspondence of components." <u>Judin v. United States</u>, 27 Fed. Cl. 759, 786 (1993) (citations omitted). Instead, "courts must consider the totality of the circumstances of each case and determine whether the alleged equivalent can be fairly characterized as an insubstantial change from the claimed subject matter without rendering the pertinent limitation meaningless." <u>Freedman Seating Co. v. Am. Seating Co.</u>, 420 F.3d 1350, 1359 (Fed. Cir. 2005), <u>cert. denied</u>, 126 S.Ct. 1167 (2006).

Based on the testimony that the surfactant keeps otherwise loose, powdered polymer together, allowing easy transport, the jury could have reasonably found that the surfactant performed, in an insubstantially different way, the enclosing function of a literal container.

That the surfactant also serves some additional treatment purpose does not vitiate a claim limitation. Therefore, even if Defendants' argument that the infringement verdict effectively and entirely eliminates a claim limitation was not waived, it is without merit. Their motion for JMOL on that ground is denied.

## 3. Obvious Combination of Prior Art

Based on evidence that polymer had been added to drilling mud, through other methods, and that soap or drill bit sticks were in use at the time the Wald patent issued, Defendants contend that Mr. Wald could not have secured a patent that would have covered the Poly Drill Sticks. A patent may not be obtained "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art . . . ." 35 U.S.C. § 103(a). Thus, Defendants cite the legal limitation on the doctrine of equivalents that there cannot be infringement "if the asserted scope of equivalency of what is literally claimed would encompass the prior art." (Defs.' Br. at 11 (quoting Wilson Sporting Goods Co. v. David Geoffrey & Assocs., 904 F.2d 677, 683 (Fed. Cir. 1990).)¹

However, again, Defendants did not identify this legal limitation in their pre-verdict motion for JMOL. Defendants noted in their seven-page brief in support of a motion for

<sup>&</sup>lt;sup>1</sup> <u>Wilson Sporting Goods</u> has been overruled in part on other grounds in <u>Cardinal Chem.</u> Co. v. Morton Int'l, 508 U.S. 83 (1993).

partial summary judgment that "a patent owner cannot use the doctrine to cover subject matter that could not have been patented because of [] prior art," but they did not develop that argument. (Dkt. No. 45 at 4.) Nor did they identify this contention as an issue in the pretrial report or object to the instructions given to the jury. Passing references to relevant facts at trial (i.e., the use of soap sticks and polymer in wells) and an instruction that the jury could consider prior art, among other things, in determining whether a person of ordinary skill in the art would find the Poly Drill Stick to possess a container equivalent did not meaningfully identify or articulate the argument Defendants now advance. Defendants simply did not assert this legal limitation, in a coherent and cogent fashion, at any time before the case went to the jury. Thus, the Court agrees that the argument is not appropriately raised, for the first time, in a post-verdict motion for JMOL.

In any event, Defendants' argument fails. The purpose of the limitation that prior art restricts the scope of equivalency is to prevent a party from obtaining coverage that could not lawfully have been obtained by the literal claims. Conroy v. Reebok Int'l, Ltd., 14 F.3d 1570, 1576-77 (Fed. Cir. 1994) (overturning grant of summary judgment that was based on conclusion that disclosure of equivalent element in prior art precluded plaintiff from asserting a range of equivalents that would encompass that equivalent).<sup>2</sup> However, "the mere

<sup>&</sup>lt;sup>2</sup> <u>Wilson Sporting Goods</u> established an analytical framework, hypothetical claim analysis, to determine the extent to which prior art restricts the application of the doctrine of equivalents.

Under a hypothetical claim analysis, a patentee proposes a hypothetical claim that is sufficiently broad in scope to *literally* encompass the accused product or process. If that claim would have been allowed by the [Patent and Trademark

existence of an element in the prior art [does not] automatically preclude[] [Plaintiffs] from asserting a scope of equivalency sufficient to encompass the corresponding element in the accused devise." <u>Id.</u> at 1577. Thus, the fact that soapsticks (the container equivalent) have been used for years does not, as a matter of law, preclude Plaintiff's infringement argument under the doctrine of equivalents.

To the extent that Defendants argue that the Poly Drill Stick would have been unpatentable at the time the Wald patent issued because *it* was obvious<sup>3</sup>, the need to have identified that argument earlier is evident because the legal conclusion of obviousness rests on underlying factual considerations, see Graham v. John Deere Co., 383 U.S. 1, 17 (1966), which were not before the jury.<sup>4</sup> Moreover, at a minimum, there was sufficient evidence in the record that there was no motivation in the prior art to make a polymer-soapstick (in this case, objective evidence of nonobviousness).

Office] over the prior art, then the prior art does not bar the application of the doctrine of equivalents. Conversely, if that claim would not have been allowed, the prior art bars application of the doctrine and infringement by equivalence may not be found.

<u>Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co.</u>, 204 F.3d 1360, 1364-65 (Fed. Cir. 2000) (citations omitted).

<sup>&</sup>lt;sup>3</sup> "Accordingly, it would have been obvious to anyone skilled in the art to add polymer as an ingredient to a soap stick since were [sic] both were well treatment compositions that performed related functions." (Defs.' Br. at 13-14.)

<sup>&</sup>lt;sup>4</sup> These underlying findings of fact are: "(1) the scope and content of the prior art; (2) the differences between the prior art and the claims; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness." <u>Riverwood Int'l Corp. v. Mead Corp.</u>, 212 F.3d 1365, 1366 (Fed. Cir. 2000).

Even if all the limitations could be found in prior art references, an invention is not obvious absent "a demonstration of the existence of a motivation to combine those references at the time of the invention. This requirement prevents a court from labeling as obvious in hindsight a solution that was not obvious to one of ordinary skill at the time of the invention." Nat'l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd., 357 F.3d 1319, 1337 (Fed. Cir. 2004) (citation omitted). "The presence or absence of a motivation to combine references in an obviousness determination . . . [is a] question[] of fact." In re Thomas, 151 Fed. Appx. 930, 933 (Fed. Cir. 2005).

Plaintiffs introduced evidence that the very idea of containing polymer to allow a below-surface introduction was met with skepticism. (Tr. at 177). Thus, for this reason alone, the Court cannot now, based on the evidence identified by Defendants, find that there was substantial evidence of motivation that the jury would not have been entitled to disregard. Therefore, Defendants' motion for JMOL on the basis of obviousness/prior art is denied.

## 4. Willfulness

Finally, Defendants argue that there was not clear and convincing evidence that Defendants' infringement was willful because the Poly Drill Stick did not literally infringe the Wald patent, Defendants had a good faith belief that the Wald patent was invalid or not infringed, and conduct occurring before the patent issued is not relevant. Defendants cannot prevail.

Defendants cannot now challenge the sufficiency of the evidence supporting the willfulness finding. They neglected to include that challenge in their pre-verdict motion for JMOL. Their assertion that by arguing that no reasonable jury would find that the equivalent container is present they necessarily challenged the sufficiency of the evidence with respect to willfulness is without merit. The Federal Circuit has rejected the contention that a pre-verdict motion for JMOL on infringement encompasses a challenge to the sufficiency of the evidence with respect to willfulness. See Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1579 (Fed. Cir. 1986) (addressing content of a motion for directed verdict). "Infringement and willful infringement are not the same thing, and Rules 50(a) and 50(b) mandate specificity." Id. Thus, the Defendants' challenge was waived.

However, even so, the Court does not agree with Defendants' assessment of the evidence. The jury heard testimony that suggested Defendant Brooks was aware of Plaintiff Wald's idea before he developed the Hole Sweep and Poly Drill Stick products, a fact he denied at trial. The jury also heard testimony that Defendants continued to sell the Poly Drill Sticks after learning of the Wald patent. Although Defendant Brooks might harbor the personal belief that the Wald patent is invalid, an idea he shared with the jury (Tr. at 258), the jury was not required to believe that his belief was reasonable or that the continued marketing and sales of the Poly Drill Sticks were taken in good faith. Defendants also elected not to present evidence of a reliance on the advice of counsel at trial. Therefore, regardless of whether the letter Defendants attach to their motion (indicating that the counsel believed the Wald patent was not valid) would have been admissible or whether Plaintiffs'

withdrawn motion in limine to exclude such evidence would have been sustained, that

evidence was not before the jury. 9A Charles Alan Wright & Arthur R. Miller, Federal

Practice and Procedure § 2537 (2d ed. 2006) (explaining that the moving party may not

introduce new evidence post-trial as support for a renewed motion). Considering the

evidence that was available to the jury, the Court cannot find that the jury was not entitled

to find clear and convincing evidence of willfulness. Thus, Defendants' motion is denied

with respect to the willfulness finding.

**CONCLUSION** 

Accordingly, Defendants' Motion for Judgment as a Matter of Law Pursuant to

Fed. R. Civ. P. 50(b) (Dkt. No. 79) is DENIED.

IT IS SO ORDERED this 27<sup>th</sup> day of July, 2006.

ROBIN J. CAUTHRON

United States District Judge

17